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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



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(54) Title: PROSTAGLANDIN E AGONISTS FOR TREATMENT OF GLAUCOMA

(57) Abstract: Compositions and methods for the treatment of glaucoma and/or ocular hypertension in mammals utilizing prostaglandin E receptor agonists, like rioprostol, sc-46275, enisoprost, misoprostol, nocloprost, 11-deoxy-16, 16-dimethyl-PGE<sub>2</sub>, 16,16-dimethyl-PGE<sub>2</sub> and enprostil, are disclosed.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/30746

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/557 A61P27/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data, MEDLINE, BIOSIS, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94 08585 A (ALCON LAB INC) 28 April 1994 (1994-04-28) abstract page 10, paragraph 2; claim 7 ---	1-15
X	SHEPPARD J.D.; SHRUM K.R.: "Pars plana Molteno implantation in complicated inflammatory glaucoma" OPHTHALMIC SURGERY, vol. 26, no. 3, 1995, pages 218-222, XP000951406 abstract page 219, column 2, paragraph 4 -page 220, column 2, paragraph 1 --- -/--	1-3,8-11



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

19 October 2000

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27/10/2000

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ANDLEY U P; FRITZ C; MORRISON A R; BECKER B: "The role of prostaglandins E2 and F2 alpha in ultraviolet radiation-induced cortical cataracts in vivo"</p> <p>INVESTIGATIVE OPHTHALMOLOGY AND VISUAL SCIENCE, vol. 37, no. 8, 1996, pages 1539-1548, XP000951411 abstract page 1541, column 1, paragraph 6 -column 2, paragraph 1 page 1543, column 2, paragraph 3 -page 1544, column 2, paragraph 1</p>	1-3,8-11
X	<p>WATERBURY L D; EGLEN R M; FAUROT G F; COOPER G F: "EP-3 BUT NOT EP-2 FP OR TP PROSTANOID RECEPTOR STIMULATION MAY REDUCE INTRAOCULAR PRESSURE."</p> <p>INVEST OPHTHALMOL VISUAL SCI, vol. 31, no. 12, 1990, pages 2560-2567, XP000951484 abstract page 2566, column 1, paragraph 2; table 1 page 2566, column 2, paragraph 2 -page 2567, column 1, paragraph 1</p>	1,6-9, 14,15
X	<p>EP 0 170 258 A (SYNTEX INC) 5 February 1986 (1986-02-05) abstract page 9, line 5-23; examples 17,18,23; table 1</p>	1,6-9, 14,15
X	<p>ZHAN, G. -L.; CAMRAS, C. B.; OPERE, C.; TANG, L.; OHIA, S. E.: "Effect of prostaglandins on cyclic AMP production in cultured human ciliary muscle cells"</p> <p>J. OCUL. PHARMACOL. THER., vol. 14, no. 4, 1998, pages 293-304, XP000951407 abstract page 293, paragraph 1 -page 294, paragraph 1; figures 1A,5; table 1 page 300, paragraph 6 -page 301, paragraph 1</p>	1-5,8-13

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-15

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box I.2

Present claims 1,2,4,6,8,10,12 relate to a large number of possible compounds/therapeutic applications. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds/claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds/therapeutic applications specifically mentioned in claims 3,5,7,11,13,15 in relation to the treatment of glaucoma and ocular hypertension.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9408585 A	28-04-1994	AT 153855 T	15-06-1997
		AU 674038 B	05-12-1996
		AU 5328694 A	09-05-1994
		DE 69311361 D	10-07-1997
		DE 69311361 T	08-01-1998
		EP 0664707 A	02-08-1995
		ES 2105333 T	16-10-1997
		HK 1007102 A	01-04-1999
		JP 3002258 B	24-01-2000
		JP 8502485 T	19-03-1996
		US 5480900 A	02-01-1996
		US 5605922 A	25-02-1997
		US 5811443 A	22-09-1998
EP 0170258 A	05-02-1986	AT 48991 T	15-01-1990
		AU 573018 B	26-05-1988
		AU 4562085 A	06-02-1986
		DE 3574968 D	01-02-1990
		DK 346085 A	01-02-1986
		ES 545700 D	16-06-1986
		ES 8607921 A	16-11-1986
		HU 38309 A, B	28-05-1986
		JP 61047459 A	07-03-1986
		NZ 212914 A	30-08-1988
		US 4792617 A	20-12-1988
		US 5057621 A	15-10-1991
		ZA 8505740 A	25-03-1987